

Living leaves of *Trillium*. Illinois. *Forbes*.

CELLULOSPORIUM *gen. nov.*

Perithecia sphaeriform, fragile, rupturing irregularly or the whole upper part falling away; spores large, multicellular.

This is a Coniomycetous genus belonging to the Order SPILERONEMEL. It is apparently related to the genus Coniothyrium but that is characterized by its simple spores, so that our plant could not be referred to it without violating the generic character. I have therefore been obliged to institute a genus for its reception.

CELLULOSPORIUM SPILEROSPORUM.—Perithecia superficial, subglobose, .01–.02 of an inch in diameter, fragile, black; spores subglobose or broadly elliptical, colored, cellular, .0008–.0012 of an inch long.

Decaying wood. Illinois. *Forbes*.

The fungus appears to the naked eye like some minute black *Sphaeria* scattered over the surface of the wood.

Puccinia atropuncta *P. & C. n. sp.*—Spots very small, yellowish, generally with a brownish center; sori numerous, small, slightly prominent, black; spores oblong-clavate, obtuse, constricted at the septum, .0016–.002 of an inch long, .0008–.0009 of an inch broad, the pedicel generally shorter than the spore.

Living leaves of *Veratrum Woodii*. Allenton, Missouri. Communicated by *G. W. Clinton*. Jefferson County, Missouri. Communicated by *E. A. Rau*. Collected by *G. W. Letterman*.

This species is quite distinct from *Puccinia Veratri*, both in color of the sori and in the character of the spores.

RHYTISMA SPARSA *P. & C. n. sp.*—Stroma very small, thin, scattered, less than one line in diameter, suborbicular, slightly convex, black, rupturing by two or three short irregular chinks; asci obovate or elliptical, eight-spored; spores oblong, uniseptate, slightly colored, .0008–.001 of an inch long, slightly constricted at the septum, the cells generally a little unequal.

Both sides of living leaves of *Sabal Palmetto*. Florida. *Clinton*.

This *Rhytisma* is a very small one, appearing to the naked eye like mere dots on the leaf. There is a small pallid or yellowish spot on the leaf opposite each stroma.

SOME NOTES FROM NORTHERN DAKOTA AND MONTANA.—In a paper contributed to the *Medical Record* upon the "Climate and Diseases of Northern Dakota and Montana," Dr. P. F. Harvey makes the following mention of the botany of that region. His observations have

extended from the Red River of the North to Milk River and Fort Custer in Montana :

“The flora of the country embraces a very respectable number of plants, many of great botanical interest, and some of considerable economic importance. Upward of seventy species were observed and analyzed by the writer during the summer of 1878, a few of which it was impossible to properly assign after a careful and searching analysis, and it is believed that the creation of new genera (?) will be necessary for them. Omitting the rarer and minor forms of plant-life as unessential to the present inquiry, it is regarded as sufficient to allude briefly to the prevalent and characteristic growth of the country. The forests fringing the water courses are constituted mainly of *Populus monilifera*, Ait., sparingly intermixed with which is found the *Fraxinus viridis*, Mx. A variety of *Salix*, with *Cornus stolonifera*, Mx., is found growing rather abundantly along the annually submerged river banks. The bark of the latter is dried and smoked by the Indians as a substitute for tobacco. The *Prunus Virginiana*, L. and the *P. Americana*, Marshall, are encountered chiefly along the banks of ravines. The *Shepherdia argentea*, Nutt., is quite common and bears an abundant crop of edible scarlet berries, intensely acid, but rich in pectin, and capable of conversion into an excellent article of jelly. *Vitis cordifolia*, Mx., frost grape, and *Ampelopsis quinquefolia*, are found chiefly among the forest of cottonwood. *Opuntia Missouriensis*, DC., is abundant, but dwarfed on the uplands.

*Rosa blanda*, Ait., forms dense thickets along the banks of many streams, attaining a height of ten or twelve feet in some instances. The plants, popularly designated as weeds, that are worthy of notice, either on account of their abundance or showy petals, are *Grindelia squarrosa*, Dunal, three varieties of *Ambrosia*, *Helianthus annuus* (?), *Polygonum aviculare*, various species of *Enothera*, *Anemone Virginiana*, various species of *Aster* and many others. A species of the *Compositæ* grows very abundantly throughout this entire section, and is erroneously called wild sage. Botanically it is the western mugwort, *Artemisia Ludoviciana*, Nutt., var. *latifolia*. It and *A. frigida* are much valued by the Indians, I am informed, in the treatment of fevers, gonorrhœa, etc. They use it in the form of decoctions. The buffalo grass (*Buchloe dactyloides*) is abundant throughout the region. Valuable as a nutritious fodder, it is of some interest scientifically as one of the rare examples of a diœcious grass, its male and female flowers differing so widely in appearance that botanists for a long time regarded them as representatives of different genera.”

RAPHIDES IN *TRILLIUM ERECTUM*, VAR. *ALBUM*—While making a microscopical examination of the parts of this *Trillium*, my attention was at once attracted by the large and well defined bundles of raphides to be found in the petals. Putting a portion of a petal between two glass sides and pressing them together until the specimen had been rendered nearly transparent, a power of 450 diameters revealed a beautiful display of these bundles. Sometimes three bundles were in the field at once and from no field were they absent. They were much larger than the cells of parenchyma among which they were lying, and in fact they did not seem to pay any attention to cell divisions but lay across them, covering sometimes as many as 4 cells. The bundles lay parallel with each other, pointing towards the base and apex of the petal in the line of most rapid growth. Some of them were very compact, the needles seeming to be firmly united together, while others were beginning to break up and discharge their crystals, caused no doubt by the pressure and consequent flow of sap. The needles were projected from the bundles at all angles, in some cases pushing each other along and thus gaining quite a distance from their starting point.

Having examined raphides in many plants I have found none so plain, none so easily obtained as these from the petals of *Trillium erectum*, var. *album*.—J. M. C.

ÆSTIVATION OF *MAHERNIA VERTICILLATA*, L.—One of my pupils, Miss Anna Chace, of Valley Falls, R. I., called my attention to the peculiar æstivation of *Mahernia verticillata*, L., a familiar hot-house shrub of the Natural Order *Sterculiaceæ*. She noticed that of the convolution of the two flowers on a branch, the twisting of one was to the right, the other to the left. My own subsequent observations confirm hers. I have to add the following notes:

It will be remembered that the inflorescence is of the definite kind, one flower terminating the stem but pendant; the other axillary to a small foliaceous bract and raised on a longer peduncle than the really older flower. In point of fact, the two flowers have nearly coincident anthesis. In all cases that I have examined the æstivation differs in the two blossoms as Miss Chace observed, but sometimes it is the terminal, sometimes the axillary one that is dextrorse, the other always reversing the direction. Again I find that of a number of flowering branches examined, about an equal proportion fall under one or other of the above heads, *i. e.* sinistro-dextrorse or dextro-sinistrorse. I coin terms to express my meaning. In all cases there is a distinct